| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/672,954 | 09/29/2000 | Bimal Poddar | 219.38696X00 | 2928 |

20457     7590     11/27/2002

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| EXAMINER |
|---|
| HAVAN, THU THAO |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2672 | |

DATE MAILED: 11/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _29 September 2000_ .

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-16_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____ .

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)          4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)          5)☐ Notice of Informal Patent Application (PTO-152)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _3_ .          6)☐ Other: .

## DETAILED ACTION

### *Drawings*

1.      This application has been filed with informal drawings which are acceptable for

examination purposes only.  Formal drawings will be required when the application is

allowed.

### *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.      Claims **1-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lawless et al. (US patent no. 5,818,469) in view of Grossman et al. (US patent no.

5,230,039).

Re claims **1, 5, 9, and 13**, Lawless teaches a method of detecting texture sharing

between multiple contexts having unique context ID's, obtaining a texture usage mask

of a subject texture (col. 3, line 5 to col. 6, line 26).  In other words, Lawless teaches

when a graphics application command is detected, the command is received by the

master thread and a determination is made as to whether an attribute change (i.e.

texture sharing) is required for the particular command received.  If an attribute change

is required, the master thread context is updated and the attribute change is flagged

(i.e. unique context ID) in a workgroup control block by the master thread.  The master

thread then creates a workgroup control block and a synchronization tag in accordance

with the order in which the workgroup was created. Thus, when an unprocessed

workgroup is identified, that workgroup is locked and the attributes are updated using

the workgroup control blocks in reverse order to obtain the most recent attribute

changes.

Lawless *fails* to specifically disclose ANDing the texture usage mask, the

resultant value being equal to 0, and the resultant value not being equal to 0 as claimed.

However, Grossman (col. 10, line 52 to col. 13, line 20; figs. 4-5b) indicates that it's well

known to have texture mapping wherein a mask value is compared to determine if the

resultant value is being equal to 0 or not being equal to 0 base on the texture being

used. When testing a particular texture is being used or not being used then it is testing

the sharing of content of the texture. These two values (i.e. mask register A and mask

register B) are ANDed together to produce a masked value. For example, Grossman

logic operation is testing if the masked input coordinate is equal or not equal to the

value stored in a compare register. If the outside map factor value is equal to zero then

processing path is taken to the bubble labeled B as shown in figure 5b, whereas if the

outside map factor is non-zero then processing continues at the bubble labeled A as

illustrated in figure 5b.

Therefore, taking the combined teaching of Lawless and Grossman as a whole, it

would have been obvious to modify Lawless to detecting that the subject texture is not

being shared by another context with the subject context upon the resultant value being

equal to 0 and the resultant value not being equal to 0 as claimed. Doing so would

enable detecting the usage of the texture if it's is being shared or not shared base on logic operations (col. 10, line 52 to col. 13, line 20; figs. 4-5b).

Re claims **2, 6, 10, and 14**, Grossman discloses revising the texture usage mask of a subject texture prior to the subject texture being used by another context by bitwise ORing the texture usage mask with a context ID of the another context to produce a resultant new texture usage mask for the subject texture (col. 10, line 52 to col. 13, line 20). Grossman teaches logic operation where the one subject texture is compared to another subject texture. He uses the ANDing and ORing operations to revised the texture mapping.

Re claims **3-4, 7-8, 11-12, and 15-16**, Grossman discloses revising the texture usage mask of a subject texture upon the subject texture no longer being used by a particular context by deleting a context ID of the particular context from the texture usage mask to produce a resultant new texture usage mask for the subject texture (col. 10, lines 17-50). In other words, Grossman teaches the unused texture mask is suppressed thus the texture no longer being used is deleted.

### Conclusion

4.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baldwin et al., US Patent No. 5,594,854

Nakamura et al., US Patent No. 5,550,962

## Inquiries

5.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-

7062.  The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

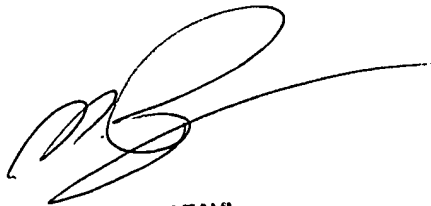Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Thu-Thao Havan

November 20, 2002

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600